

other, typically by peptide bonds between the α -amino and carboxyl groups of adjacent amino acids. The preferred CTL-inducing peptides of the invention are 15 residues or less in length or 13 residues or less in length and usually consist of between about 8 and about 11 residues, preferably 9 or 10 residues. The preferred HTL-inducing oligopeptides are less than about 50 residues in length and usually consist of between about 6 and about 30 residues, more usually between about 12 and 25, and often between about 15 and 20 residues.

In the Claims:

Please cancel claims 48-76.

Please add the following new claims 77-204.

77. (New) An isolated peptide less than 15 amino acids in length comprising an oligopeptide selected from the group consisting of:

FLLLADARV (SEQ ID NO:3568)
YLVAYQATV (SEQ ID NO:3569)
RLIVFPDLGV (SEQ ID NO:3570)
ILAGYGAGV (SEQ ID NO:3575)
YLLPRRGPRL (SEQ ID NO:3576) and
YLVTRHADV (SEQ ID NO:3578).

78. (New) The peptide of claim 77, which is 11 amino acids in length.
79. (New) The peptide of claim 77, which is 10 amino acids in length.
80. (New) The peptide of claim 77, which is 9 amino acids in length, wherein said oligopeptide is selected from the group consisting of:

FLLLADARV (SEQ ID NO:3568)
YLVAYQATV (SEQ ID NO:3569)
ILAGYGAGV (SEQ ID NO:3575) and
YLVTRHADV (SEQ ID NO:3578).

81. (New) The peptide of claim 77, which is fused to a T helper peptide.
82. (New) The peptide of claim 77, which is fused to spacer or linker amino acids.
83. (New) The peptide of claim 77, which is fused to a carrier.
84. (New) The peptide of claim 77, which is linked to a lipid.
85. (New) A fusion protein comprising the peptide of claim 77.
86. (New) A homopolymer of the peptide of claim 77.
87. (New) A heteropolymer of the peptide of claim 77 and a different peptide.
88. (New) A composition comprising the peptide of claim 77 and a carrier.
89. (New) A pharmaceutical composition comprising the peptide of claim 77 and a carrier.
90. (New) A composition comprising the peptide of claim 77 and a liposome.
91. (New) A vaccine comprising the peptide of claim 77 and a pharmaceutically acceptable carrier.
92. (New) A composition comprising the peptide of claim 77, and one or more second peptides.
93. (New) The composition of claim 92, wherein said peptides form a fusion protein.
94. (New) The composition of claim 92, which comprises a carrier.

95. (New) A pharmaceutical composition comprising the composition of claim 92 and a carrier.
96. (New) The composition of claim 92, wherein said peptides are fused by spacer or linker amino acids.
97. (New) A vaccine comprising the composition of claim 92 and a pharmaceutically acceptable carrier.
98. (New) The composition of claim 92, wherein said one or more second peptides is less than 15 amino acids in length and comprises an oligopeptide selected from the group consisting of:
- RLGVRATRK (SEQ ID NO:3580)
LLFNILGGWV (SEQ ID NO:3567)
FLLADARV (SEQ ID NO:3568)
YLVAYQATV (SEQ ID NO:3569)
RLIVFPDLGV (SEQ ID NO:3570)
DLMGYIPLV (SEQ ID NO:3571)
ILAGYGAGV (SEQ ID NO:3575)
YLLPRRGPRV (SEQ ID NO:3576) and
YLVTRHADV (SEQ ID NO:3578).
99. (New) The composition of claim 98, wherein said peptides form a fusion protein.
100. (New) The composition of claim 98, which comprises a carrier.
101. (New) A pharmaceutical composition comprising the composition of claim 98 and a carrier.
102. (New) The composition of claim 98, wherein said peptides are fused by spacer or linker amino acids.

103. (New) A vaccine comprising the composition of claim 98 and a pharmaceutically acceptable carrier.

104. (New) The composition of claim 92, wherein said one or more second peptides is less than 15 amino acids in length and comprises an oligopeptide selected from the group consisting of:

CTCGSSDLY (SEQ ID NO:3591)
KTSERSQPR (SEQ ID NO:3579)
QLFTFSPRR (SEQ ID NO:3581)
RMYVGGVEHR (SEQ ID NO:3582)
LIFCHSKKK (SEQ ID NO:3583)
GVAGALVAFK (SEQ ID NO:3584) and
TLGFGAYMSK (SEQ ID NO:3586).

105. (New) The composition of claim 104, wherein said peptides form a fusion protein.

106. (New) The composition of claim 104, which comprises a carrier.

107. (New) A pharmaceutical composition comprising the composition of claim 104 and a carrier.

108. (New) The composition of claim 104, wherein said peptides are fused by spacer or linker amino acids.

109. (New) A vaccine comprising the composition of claim 104 and a pharmaceutically acceptable carrier.

110. (New) The composition of claim 92, wherein said one or more second peptides is less than 15 amino acids in length and comprises the oligopeptide LPGCSFSIF (SEQ ID NO:3588).

111. (New) The composition of claim 110, wherein said peptides form a fusion protein.

112. (New) The composition of claim 110, which comprises a carrier.
113. (New) A pharmaceutical composition comprising the composition of claim 110 and a carrier.
114. (New) The composition of claim 110, wherein said peptides are fused by spacer or linker amino acids.
115. (New) A vaccine comprising the composition of claim 110 and a pharmaceutically acceptable carrier.
116. (New) The composition of claim 92, wherein said one or more second peptides is less than 15 amino acids in length and comprises an oligopeptide selected from the group consisting of:

LTCGFADLMGY (SEQ ID NO:2257) and
LSAFSLHSY (SEQ ID NO:2251).
117. (New) The composition of claim 116, wherein said peptides form a fusion protein.
118. (New) The composition of claim 116, which comprises a carrier.
119. (New) A pharmaceutical composition comprising the composition of claim 116 and a carrier.
120. (New) The composition of claim 116, wherein said peptides are fused by spacer or linker amino acids.
121. (New) A vaccine comprising the composition of claim 116 and a pharmaceutically acceptable carrier.

122. (New) An isolated peptide 9, 10, or 11 amino acids in length comprising the oligopeptide DLMGYIPLV (SEQ ID NO:3571).
123. (New) The peptide of claim 122, which is 10 amino acids in length.
124. (New) The peptide of claim 122, which is 9 amino acids in length.
125. (New) The peptide of claim 122, which is fused to a T helper peptide.
126. (New) The peptide of claim 122, which is fused to spacer or linker amino acids.
127. (New) The peptide of claim 122, which is fused to a carrier.
128. (New) The peptide of claim 122, which is linked to a lipid.
129. (New) A fusion protein comprising the peptide of claim 122.
130. (New) A homopolymer of the peptide of claim 122.
131. (New) A heteropolymer of the peptide of claim 122 and a different peptide.
132. (New) A composition comprising the peptide of claim 122 and a carrier.
133. (New) A pharmaceutical composition comprising the peptide of claim 122 and a carrier.
134. (New) A composition comprising the peptide of claim 122 and a liposome.
135. (New) A vaccine comprising the peptide of claim 122 and a pharmaceutically acceptable carrier.
136. (New) A composition comprising the peptide of claim 122, and one or more second peptides.

137. (New) The composition of claim 136, wherein said peptides form a fusion protein.
138. (New) The composition of claim 136, which comprises a carrier.
139. (New) A pharmaceutical composition comprising the composition of claim 136 and a carrier.
140. (New) The composition of claim 136, wherein said peptides are fused by spacer or linker amino acids.
141. (New) A vaccine comprising the composition of claim 136 and a pharmaceutically acceptable carrier.
142. (New) The composition of claim 136, wherein said one or more second peptides is less than 15 amino acids in length and comprises an oligopeptide selected from the group consisting of:

RLGVRATRK (SEQ ID NO:3580)
LLFNILGGWV (SEQ ID NO:3567)
FLLLADARV (SEQ ID NO:3568)
YLVAYQATV (SEQ ID NO:3569)
RLIVFPDLGV (SEQ ID NO:3570)
DLMGYIPLV (SEQ ID NO:3571)
ILAGYGAGV (SEQ ID NO:3575)
YLLPRRGPR (SEQ ID NO:3576) and
YLVTRHADV (SEQ ID NO:3578).

143. (New) The composition of claim 142, wherein said peptides form a fusion protein.
144. (New) The composition of claim 142, which comprises a carrier.
145. (New) A pharmaceutical composition comprising the composition of claim 142 and a carrier.

146. (New) The composition of claim 142, wherein said peptides are fused by spacer or linker amino acids.
147. (New) A vaccine comprising the composition of claim 142 and a pharmaceutically acceptable carrier.
148. (New) The composition of claim 136, wherein said one or more second peptides is less than 15 amino acids in length and comprises an oligopeptide selected from the group consisting of:

CTCGSSDLY (SEQ ID NO:3591)
KTSERSQPR (SEQ ID NO:3579)
QLFTFSPRR (SEQ ID NO:3581)
RMYVGGVEHR (SEQ ID NO:3582)
LIFCHSKKK (SEQ ID NO:3583)
GVAGALVAFK (SEQ ID NO:3584) and
TLGFGAYMSK (SEQ ID NO:3586).

149. (New) The composition of claim 148, wherein said peptides form a fusion protein.
150. (New) The composition of claim 148, which comprises a carrier.
151. (New) A pharmaceutical composition comprising the composition of claim 148 and a carrier.
152. (New) The composition of claim 148, wherein said peptides are fused by spacer or linker amino acids.
153. (New) A vaccine comprising the composition of claim 148 and a pharmaceutically acceptable carrier.
154. (New) The composition of claim 136, wherein said one or more second peptides is less than 15 amino acids in length and comprises the oligopeptide LPGCSFSIF (SEQ ID NO:3588).

155. (New) The composition of claim 154, wherein said peptides form a fusion protein.
156. (New) The composition of claim 154, which comprises a carrier.
157. (New) A pharmaceutical composition comprising the composition of claim 154 and a carrier.
158. (New) The composition of claim 154, wherein said peptides are fused by spacer or linker amino acids.
159. (New) A vaccine comprising the composition of claim 154 and a pharmaceutically acceptable carrier.
160. (New) The composition of claim 136, wherein said one or more second peptides is less than 15 amino acids in length and comprises an oligopeptide selected from the group consisting of:
LTCGFADLMGY (SEQ ID NO:2257) and
LSAFSLHSY (SEQ ID NO:2251).
161. (New) The composition of claim 160, wherein said peptides form a fusion protein.
162. (New) The composition of claim 160, which comprises a carrier.
163. (New) A pharmaceutical composition comprising the composition of claim 160 and a carrier.
164. (New) The composition of claim 160, wherein said peptides are fused by spacer or linker amino acids.

165. (New) A vaccine comprising the composition of claim 160 and a pharmaceutically acceptable carrier.

166. (New) An isolated peptide less than 15 amino acids in length comprising an oligopeptide selected from the group consisting of:
CTCGSSDLY (SEQ ID NO:3591)
KTSERSQPR (SEQ ID NO:3579)
QLFTFSPRR (SEQ ID NO:3581)
RMYVGGVEHR (SEQ ID NO:3582)
LIFCHSKKK (SEQ ID NO:3583)
GVAGALVAFK (SEQ ID NO:3584) and
TLGFGAYMSK (SEQ ID NO:3586).
167. (New) The peptide of claim 166, which is 11 amino acids in length.
168. (New) The peptide of claim 166, which is 10 amino acids in length.
169. (New) The peptide of claim 166, which is 9 amino acids in length, wherein said oligopeptide is selected from the group consisting of:
CTCGSSDLY (SEQ ID NO:3591)
KTSERSQPR (SEQ ID NO:3579)
QLFTFSPRR (SEQ ID NO:3581) and
LIFCHSKKK (SEQ ID NO:3583).
170. (New) The peptide of claim 166, which is fused to a T helper peptide.
171. (New) The peptide of claim 166, which is fused to spacer or linker amino acids.
172. (New) The peptide of claim 166, which is fused to a carrier.
173. (New) The peptide of claim 166, wherein said peptides are fused by spacer or linker amino acids.
174. (New) A fusion protein comprising the peptide of claim 166.
175. (New) A homopolymer of the peptide of claim 166.
176. (New) A heteropolymer of the peptide of claim 166 and a different peptide.

177. (New) A composition comprising the peptide of claim 166 and a carrier.
178. (New) A pharmaceutical composition comprising the peptide of claim 166 and a carrier.
179. (New) A composition comprising the peptide of claim 166 and a liposome.
180. (New) A vaccine comprising the peptide of claim 166 and a pharmaceutically acceptable carrier.
181. (New) A composition comprising the peptide of claim 166, and one or more second peptides.
182. (New) The composition of claim 181, wherein said peptides form a fusion protein.
183. (New) The composition of claim 181, which comprises a carrier.
184. (New) A pharmaceutical composition comprising the composition of claim 181 and a carrier.
185. (New) The composition of claim 181, wherein said peptides are fused by spacer or linker amino acids.
186. (New) A vaccine comprising the composition of claim 181 and a pharmaceutically acceptable carrier.
187. (New) The composition of claim 181, wherein said one or more second peptides is less than 15 amino acids in length and comprises an oligopeptide selected from the group consisting of:
RLGVRATRK (SEQ ID NO:3580)
LLFNILGGWV (SEQ ID NO:3567)

FLLLADARV (SEQ ID NO:3568)
YLVAYQATV (SEQ ID NO:3569)
RLIVFPDLGV (SEQ ID NO:3570)
DLMGYIPLV (SEQ ID NO:3571)
ILAGYGAGV (SEQ ID NO:3575)
YLLPRRGPR (SEQ ID NO:3576)
YLVTRHADV (SEQ ID NO:3578)
CTCGSSDLY (SEQ ID NO:3591)
KTSERSQPR (SEQ ID NO:3579)
QLFTFSPRR (SEQ ID NO:3581)
RMYVGGVEHR (SEQ ID NO:3582)
LIFCHSKKK (SEQ ID NO:3583)
GVAGALVAFK (SEQ ID NO:3584) and
TLGFGAYMSK (SEQ ID NO:3586).

188. (New) The composition of claim 187, wherein said peptides form a fusion protein.
189. (New) The composition of claim 187, which comprises a carrier.
190. (New) A pharmaceutical composition comprising the composition of claim 187 and a carrier.
191. (New) The composition of claim 187, wherein said peptides are fused by spacer or linker amino acids.
192. (New) A vaccine comprising the composition of claim 187 and a pharmaceutically acceptable carrier.
193. (New) The composition of claim 181, wherein said one or more second peptides is less than 15 amino acids in length and comprises the oligopeptide LPGCSFSIF (SEQ ID NO:3588).
194. (New) The composition of claim 193, wherein said peptides form a fusion protein.
195. (New) The composition of claim 193, which comprises a carrier.

196. (New) A pharmaceutical composition comprising the composition of claim 193 and a carrier.
197. (New) The composition of claim 193, wherein said peptides are fused by spacer or linker amino acids.
198. (New) A vaccine comprising the composition of claim 193 and a pharmaceutically acceptable carrier.
199. (New) The composition of claim 181, wherein said one or more second peptides is less than 15 amino acids in length and comprises an oligopeptide selected from the group consisting of:
LTCGFADLMGY (SEQ ID NO:2257) and
LSAFSLHSY (SEQ ID NO:2251).
200. (New) The composition of claim 199, wherein said peptides form a fusion protein.
201. (New) The composition of claim 199, which comprises a carrier.
202. (New) A pharmaceutical composition comprising the composition of claim 199 and a carrier.
203. (New) The composition of claim 199, wherein said peptides are fused by spacer or linker amino acids.
204. (New) A vaccine comprising the composition of claim 199 and a pharmaceutically acceptable carrier.